

Battlespace Systems Support Directorate Bulletin



October 2003 Volume 2, Issue 1

"Serving the Needs of the Battlespace Systems Community"

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The BSSD Bulletin is published quarterly under supervision of the Director, US Army Communications Electronic Command (CECOM) Software Engineering Center (SEC), Battlespace Systems Support Directorate to provide DoD, military, and civilian personnel information on technical development, issues, and ideas of and about the Directorate. The views and opinions expressed are not necessarily those of the Department of the Army, CECOM, or the SEC.

SEC IFS Teams with PD-IMETS to Train the Acquisition of Weather Impacts among Army Battle Command Systems

Submitted by Don Adamson, CECOM SEC

Promoting system functionality among operators of different systems requires a perceived benefit or directive rarely found in standard operating procedures. With the advent of client-server technology, operators increasingly have the capability to access applications residing on other systems. These applications normally provide pertinent information through a Request For Information (RFI) from another system's operator; but with client-server technology, RFIs no longer need be queued for response. Instead, commanders can expect their operators to access client applications to provide critical information without delay. This anytime, anywhere access to information optimizes the decision-making process.

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SEC IFS Supports the 2nd Infantry Division in the WARPATH III Exercise on the Korean Peninsula

Submitted by Julia Taylor, CECOM SEC

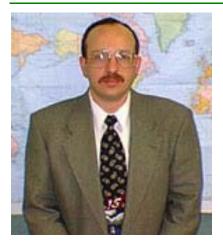
he 2nd Infantry Division (2ID) is the most forward deployed, combat ready division in the US Army. The Division's headquarters is located at Camp Red Cloud, Uijongbu, and its primary mission is to deter war on the Korean peninsula standing shoulder-to-shoulder with Korean units south of the Demilitarized Zone (DMZ). Unique to the 2ID is that divisional units are spread over 17 installations. The remaining 14 camps have smaller concentrations of combat and support units. "In front of them all" stands the 1st Battalion, 506th Inf. Regiment, located north of Freedom Bridge and the Imjin River, a scant two kilometers from the DMZ. One of the largest armies (1.1 million) in the world sits just across the DMZ. The fighting stopped in 1953, but the Korean War never officially ended.

The 2ID contains armor, mechanized infantry, air assault infantry, and combat aviation units. The 1st and 2nd Brigades are the maneuver brigades, and have a total of two M1A1 Abrams tank battalions, two mechanized infantry battalions (Bradley), and two air assault infantry battalions. Other major commands are the Aviation Brigade, the Division Artillery (DIVARTY), the Engineer Brigade, and the Division Support Command. The Division Artillery is the largest in the Army and contains more Multiple-Launched Rocket Systems than any other DIVARTY.

The 2ID's organic 3rd Brigade, located at Ft. Lewis, Washington, is currently being reorganized as an Interim Brigade Combat Team. During this transition, the 1st Brigade, 1st Infantry Division (Mechanized) at Ft. Riley, Kansas, will be the CONUS-based reinforcing Brigade for the Division, and is similar in design to the 2ID's armor-heavy first brigade.

From the Senior Editor's Desk: Fostering Collaboration and Trust

Commentary By Joseph Ingrao, Deputy Director, Battlespace Systems Support



hen considering what you plan to accomplish (or have already accomplished) it's essential that you think and talk in terms of *our* goals. Your task as a leader is to help other people reach mutual goals, not just your goals. Because no one ever accomplishes anything significant alone, your attitude can't be "Here's what I plan to do," but rather "Here's what we plan to do." This inclusive language reinforces the belief that goals are truly collaborative, not exploitative.

Some leaders may see these ideas as gimmicky and a waste of time and resources, but the reality is that we can't all be in this together unless we're face to face on both a personal and professional basis. We need opportunity to socialize, exchange information, and solve problems informally.

There is no sure way to get others to trust you or anyone else. We do know, however, that building trust is a process that begins when one party is willing to risk being the first to open up. Demonstrating your trust in other people encourages them to trust in return. If you, the leader, show a willingness to trust others with information (both personal and professional), constituents will be likewise inclined to overcome any doubts they might have about sharing information. Distrust is equally contagious; if you exhibit distrust of others, those others will hesitate to place their trust in you or their colleagues.

Trust can't be forced. If a leader is bent on misunderstanding people and refuses to perceive them as either well intentioned or competent, there may be little you can do to change that perception. If you find yourself in a climate of fear and distrust created by someone else, recognize that it's quite natural for the people involved to be reluctant to trust others.

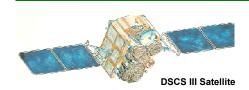
People must feel safe and secure to develop trust. When a contributor's thoughts and ideas are shot down or ridiculed, the climate isn't safe; neither is it conducive to developing new ideas.

RESPECT <u>IS</u> EARNED, NOT BESTOWED...■



Defense Satellite Communications System Overview

Submitted by Wing C. Young, CECOM SEC



he Defense Satellite Communications System (DSCS) is a constellation of Department of Defense (DoD) geosynchronous communications satellites consisting of space, ground, and control segments. The DSCS mission is to provide global Satellite Communications (SATCOM) connectivity to DoD, the President and the Secretary of Defense, Joint Chiefs of Staff, Unified and Specified Combatant Commander, Military Services, other Federal Agencies, and Allied Forces. DSCS is an integral component

of the global Defense Information System Network (DISN). The DSCS provides a reliable, high-capacity, quality communications capability in support of peacetime, contingency, and wartime operations. The DSCS has been an extremely valuable asset for supporting military and government communications over the past several decades.

The DSCS currently supports two types of satellite communication's multiple access to DSCS transponders, namely, Frequency Division Multiple Access (FDMA) and Spread Spectrum Multiple Access. The DSCS Electronic-Counter-Counter-Measures (ECCM) network provides anti-jam satellite connectivity for a number of high priority command and control circuits. The DSCS ECCM

network also mitigates the effects of nuclear-induced scintillation on the connectivity of selected users.

Space Segment. The DSCS space segment consists of DSCS III satellites in a constellation that is configured for operation to provide maximum mission support. The DSCS III satellite provides protected communication services and has greater performance capability than the phased out DSCS II satellites, particularly in the area of antenna flexibility. The DSCS III satellites, designed to provide Super High Frequency SATCOM capability, are placed in geosynchronous orbital positions 22,300 miles above the equator to provide coverage between 75° north latitude and 75° south

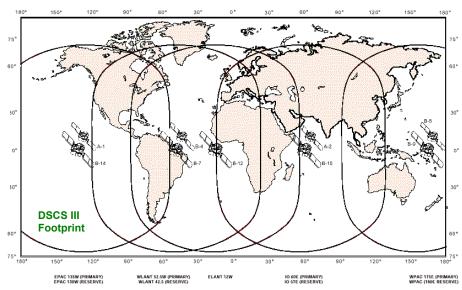
latitude The DSCS constellation provides communications services in each of the following satellite areas: East Pacific, West Atlantic, East Atlantic, Indian Ocean, and West Pacific. The DSCS III satellite signals are broadcast on six channels between 7250 and 8400 MHz and can be received by ground antennas that range in diameter from 33 inches to 60 feet. The DSCS III satellite also carries a Single Channel Transponder that is used to transmit Emergency Action Messages from the President to nuclear forces. DSCS III satellites operate in the X-band region, providing uplink services in the 7900 to 8400 MHz band and downlink services in the 7250 to 7750 MHz band.

Earth Segment. The DSCS earth segment consists of a network of earth terminals operating in a point-to-point and multipoint, multi-carrier network configuration for each satellite.

DSCS earth terminals are categorized as fixed, transportable, and mobile equipment. They are further categorized as DSCS standard heavy, medium, light, and other terminals. Other terminals that use DSCS include Ground Mobile Forces Satellite Communications, airborne, shipborne, Surface Towed Array Sensor System, and Diplomatic Telecommunications System terminals.

DSCS earth terminals can also be categorized as strategic and tactical terminals. Strategic terminals are fixedstation heavy or medium terminals (HT/MT), which provide the international satellite trunking for the DISN. The tactical terminals are deployable and compatible with the Area Common User System to provide range extension links for critical nodes. Strategic terminals include the AN/FSC-78(V) and AN/FSC-79 (each has a 60-foot antenna), AN/GSC-39(V) (38-foot antenna), AN/GSC-52(V) (50-foot antenna), and AN/GSC-49 (20-foot parabolic antenna or 8-foot quick-reaction parabolic antenna). Tactical terminals include the AN/TSC-85B and the AN/TSC-93B. These tactical terminals are deployed to support echelons from theater/Joint Task Force down to brigade level.

Control Segment. The control segment refers to DSCS assets used to maintain



and restore maximum DSCS performance under changing traffic conditions, natural or man-made stresses, disturbances, and equipment disruption. The primary objectives for DSCS System control are to

- ensure critical subscriber and system connectivity;
- ensure that system control reacts quickly and flexibly, but in such a way as to impose no operational constraints on the system;
- incorporate a level of control and system management survivability consistent with the survivability of the DSCS;
- ensure sustained quality service through timely, effective testing and analysis in both normal and stressed environments;
- ensure interoperability or compatibility with the control systems associated with other communications systems, including tactical or allied systems;
- increase DSCS efficiency:
- improve management's view of availability status, quality of service, and performance of the DSCS;
- facilitate Operation and Maintenance activities at DSCS stations:
- minimize manpower resources and support information required for control.

The DSCS Operations Control System (DOCS) is a control system developed to ensure that the DSCS mission and

operational objectives are met. The system provides for operational management of DSCS earth terminals and satellite resources needed to satisfy mission requirements. Specifically, the control system performs the following functions:

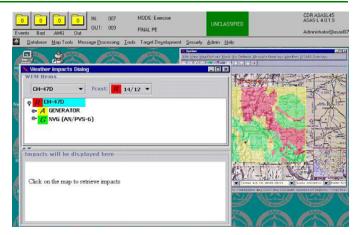
- Resource Allocation-To determine the DSCS resources required to satisfy user requirements
- ◆ Satellite Link Establishment-To establish and reconfigure protected and unprotected links
- Maintenance of Link Quality-To measure and monitor link performance quality and maintain the link quality under normal as well as adverse environmental conditions
- ◆ Satellite Configuration Control-To monitor and control the DSCS III communications payload and perform satellite housekeeping functions
- ◆ Satellite Signal Monitoring-To monitor and detect allocation violations and assist earth terminals in diagnosing the cause for signal anomalies
- ◆ Terminal Configuration Control—
 To monitor the receive spectrum, parameter measurements, display lights, meters, or alarms for determination of malfunctions and to respond to various control situations

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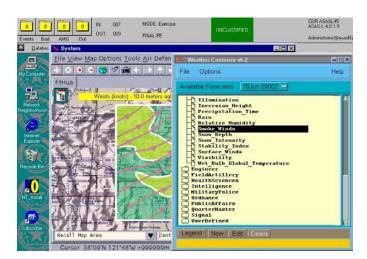
Before this optimization can occur, operators must learn of the client application, its benefits, and how to use it. Program Director for the Integrated Meteorological System (PD-IMETS) teamed with the SEC Intelligence Fusion Systems (IFS) Division to address this problem. SEC IFS engineers produced an Interactive Multimedia Instruction (IMI) product specifically targeted for Army Battle Command Systems (ABCS) operators with systems capable of accessing IMETS client applications on the Joint Mapping Toolkit (JMTK). As an additional benefit, the product inherently supports several training topics for Air Force personnel serving on the US Army's Combat Weather Team (CWT) operating the IMETS. With IMETS client applications, ABCS components on the battlefield can retrieve weather impacts without CWT assistance. This article describes the features and benefits of the IMI produced to train operators to use IMETS client applications on the JMTK.

The IMETS is the digital weather product interface to the Tactical Operations Centers. The system combines advanced observations from Meteorological Satellites, upper air observations, surface weather observing networks, and numerical models to build weather forecasts in the Area of Operations. The IMETS enhances the tactical commander's situational awareness by providing visualizations of weather on the common tactical picture. Among its utilities, the Integrated Weather Effects Decision Aid (IWEDA) has attracted noticeable interest from service branches outside the Army because of its simple, yet useful application of weather data to combat operations. The IWEDA compares current weather data to rules regulating the use of weapon systems and assesses the conditions as marginal, favorable, or unfavorable. For example, if wind speeds were predicted to be 50 knots, the IWEDA application would render an unfavorable impact for the use of a CH-47D helicopter in the Area of Interest at the queried time and location. This notifies commanders that an alternate time or form of transport is warranted due to weather. While the Program Director presses toward extending the client-server capabilities to all components of ABCS, SEC IFS personnel have an ongoing mission to obtain and enter additional rules to account for the numerous weapon systems potentially utilized by the Joint forces. As the IMETS functionality increases in availability through the client-server configuration, the client applications can be leveraged to provide weather impacts for decision making. Such leverage requires operators to know what is available and how to use it.

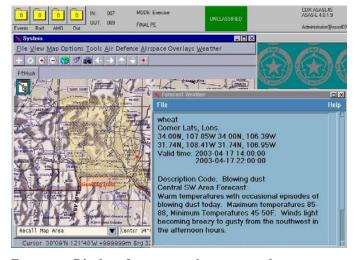
PD-IMETS acted to disseminate this information and commissioned SEC IFS engineers to develop an IMI product. No other mechanisms are in place to effectively train such a wide group of operators on subsets of system-specific applications. The primary goal of the IMI was to educate IMETS and ABCS operators on the use and benefits of its three client applications—Effects, Contours, and Forecast—illustrated here.



Effects—Displays weather impacts on selected systems.



Contours—Displays weather impacts for battlefield functional areas.



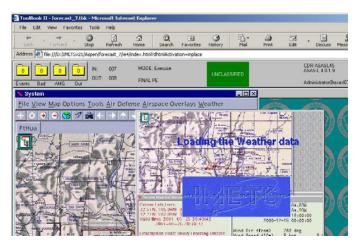
Forecast—Displays forecasts and severe weather warnings.



User Interaction page from the Effects Access module allows users to practice the Access step.

PD-IMETS specified features for inclusion in the IMI; that is, interactivity, multimedia, and a user interface consistent with existing ABCS style guidelines. To meet those requirements, text and graphics were arranged in short, easy to comprehend pages with user interaction appearing every third or fourth screen. User interaction screens prompt the learner to implement procedures or investigate properties of the application described in the previous section. The user clicks to perform the sequence of actions necessary to access the application or perform a specific function on a portion of an authentically simulated interface. At the conclusion of the lessons, learners must prove competent in the use of the simulated application to complete a mission, thereby demonstrating proficiency at real-world tasks. Should the user need assistance, the Show Procedures button provides step-by-step directions but forfeits the learner's chance to earn credit for course completion. Course objectives are satisfied only when the user completes a mission independently.

Most lessons include streaming audio, combined with animation, to vividly convey the application's purpose and procedures. Commanders can benefit with a review of these presentations, while operators can delve further to practice the content on the user



The Forecast module in Internet Explorer shows the webbased capability.

interaction pages, then test themselves in simulated missions.

ABCS component Program Management offices have agreed on a style guide that depicts a single interface for use with all ABCS computer-based training products: While several iterations have been published, the most recent version was incorporated into the IMETS Client Functionality on the JMTK trainer, making it one of the first. Use of the ABCS style guide provides familiarity and ease of use for learners on other ABCS training products—once users have worked with one, they have learned the behaviors required to navigate the training and can focus on its training content.

Objectives for the learner include stating the purpose of each client application, how to access each application from the JMTK, and how to use various aspects of each application to provide pertinent information for the commander. Since assessments are performance based, commanders are assured that a learner's successful completion of the course indicates competence at exploiting the IMETS functionality to provide weather impacts.

SEC IFS engineers programmed the training to run in Internet Explorer to ensure the broadest range of deployment methods from the Internet to CD-ROM. At the direction of the PD, an initial release was done with

CD-ROM to support a pilot training program planned for August 2003. Subsequent posting of training to the web promises to reach the greatest number of operators in the least amount of time.

The extent of collaboration between the PD and CECOM SEC IFS personnel represents an ideal level of effort and support alluded by the Deputy Secretary of Defense in the Defense Acquisition Memo, dated 30 October 2002. Specifically, the IMI described above provides "...options for individual, collective, and Joint training for Operators," "options to enhance user capabilities, maintain skill proficiencies, and reduce individual and collective training costs," and "...reduce demand on the training establishment."

SEC IFS and PD-IMETS have worked together to increase the ubiquity of weather impacts among ABCS components through client-server technology and the use of an IMI product. This combination of skill and strategy propagates IMETS functionality, not just by announcing its capabilities, but producing and publishing the requisite training for operators to learn to access and use its applications. Since weather conditions have a pervasive impact on combat mission planning and execution, no obstacle should prevent its dissemination among ABCS components, including a lack of training.

- Subnetwork Control—To coordinate, monitor, and allocate DSCS resources in support of special user subnetworks that maintain their own subnetworks and control subsystems
- ◆ Technical Reporting—To prepare and report system status and performance for the control hierarchy and higher levels of Defense Information Systems Agency (DISA) management

The DOCS provides real-time monitor and control of DSCS networks to ensure maximum effective use of satellite resources to support vital C³ requirements for operational missions. The control concept specifies the major control categories as satellite control, communications payload control, and SATCOM network control.

- Satellite telemetry, tracking, and control is performed by the Consolidated Space Test Center (CSTC) in Sunnyvale, California, the Consolidated Space Operations Center (CSOC) in Colorado Springs, Colorado. The CSTC and the CSOC use a network of remote tracking stations to keep DSCS satellites in their assigned orbital positions to maintain their attitudes relative to the earth, and support the housekeeping functions necessary to ensure optimum operation of the satellite.
- ◆ Communications payload control is the management of the satellite communications subsystem to provide the most efficient use of that resource. In the operating environment, factors such as antenna coverage, communications link mar-

- gin requirements, and stressed conditions will affect the payload configuration. DISA payload management decisions will be implemented through the shared satellite command capabilities of the CSTC, the CSOC, and the DSCS Operation Centers (which will be referred to as WSOCs [Wideband SATCOM Operation Centers]).
- Satellite communications network control is the technical management of the DSCS radio frequency spectrum, including power, bandwidth, and frequency allocations, in order to meet user requirements. The primary network control function is to provide for network establishment, network configuration control, status reporting, and performance monitoring of the equipment and communications signals of the DSCS networks.

The DOCS consists of a hierarchy of control elements that are responsible for the control of DSCS communications. These elements are DSCS Operational Support System (DOSS), DSCS Automatic Spectrum Analyzer (DASA), DSCS FDMA Control Subsystem (DFCS), DSCS ECCM Control Subsystem (DECS), Production Satellite Configuration Control Element (PSCCE). Frequency Modulation Orderwire, Terrestrial Critical Control Circuit Network with Smart Multi-Circuit Terminal II (SMCT II), Radio Frequency Interface Subsystem, DSCS Integrated Management Subsystem (DIMS), Interim Tactical Orderwire System (ITOS), Frequency Conversion Subsystem, and Patch and Test Facility.



AN/FSC-78 Earth Terminal

CECOM SEC support to DSCS. Over the past several decades, CECOM SEC has provided software engineering support to Project Manager SATCOM (currently known as Project Manager Defense Communications and Army Transmission Systems, PM DCATS), DISA, and Army Space Command in the procurement, maintenance, and operation of DSCS equipment. SEC currently provides post deployment software support to many DOCS subsystems and earth terminals: DOSS/DASA, DFCS, DECS, PSCCE, HT/MT Modernization (AN/FSC-78/79 heavy terminals), and State-of-the-Art Medium Terminals (AN/GSC-52 Medium Terminals). In addition, SEC is currently supporting PM DCATS in the development of replacement and new systems: Integrated Monitoring and Power Control Subsystem (will replace DFCS), Common Network Planning Software (will replace DNPS), Global Terrestrial Critical Control Circuits System (will replace SMCT II), Replacement Frequency Modulation Orderwire (will replace ITOS), Replacement Satellite Configuration Control Element (will replace PSCCE), 52-modernization (which modernizes the AN/GSC-52 terminals). and the DSCS DIMS.

An ASE Program—That Works!!!

Submitted by CW2 Charles A. Anderson, ASE/EWO, Indiana Army National Guard 681st Medical Company (Air Ambulance)/AASF Indiana Army National Guard

Reserve), now comprise over half of Army aviation.
As an Electronic Warfare Officer (EWO), whether at Brigade, Battalion, Troop, or Unit, your duties can be found in Ft. Rucker's Aircraft Survi-

vability Equipment (ASE)/EWO School's student handouts. The "Introduction to Electronic Warfare for the ASE/EWO" (File No. 78-4922-2) lists the nine required duties of the EWO. The EWO's single most important duty is Technical Advisor to the commander.

EWOs monitor the inspection and maintenance of ASE systems; they are the primary administrator over ASET trainers, aircraft system training, and controlling secret information. This includes managing the National Imagery Mapping Association mapping

for the Portable Flight Planning System (PFPS) and the Aviation Mission Planning System (AMPS), the COMSEC tapes for GPS, SINGARS, HAV-OUICK, IFF (Identification Friend or Foe), KY-58, KY-100, HF (High Frequency), and the Data Transfer Cartridge for the 128B. Mission planning using PFPS and AMPS is a very important duty. As the primary unit trainer on ASE, you must ensure each unit member is trained on Threat ID, AN/APR-39 Mission Data Set (MDS), ALO-144, M-130, AN/ CYZ-10 Automated Net Control Device (ANCD), Secure Internet Protocol Router Network (SIPRNET), and Army Reprogramming Analysis Team (ARAT) Display and Debriefing Subsystem (DDS) usage.

All aviation units are required to have an ASE training program. However, not all aviation units have every item mentioned above. At Ft. Rucker, EWOs learn about all these items and equipment, and are sent home with the knowledge and desire to build an effective ASE Program. Unfortunately, the priority of other training events and lack of funding for ASE can make building a solid ASE Program difficult. Also, lack of information and personnel changes are often additional challenges EWOs face tailoring an ASE Program to their unit or mission needs. Mission accomplishment and survivability of Army aviation units depends on an understanding of their role in combined arms employment and tactics. Today, an ineffective ASE Program is not an option we can live with.

Future Plan

EWOs should follow the lead of the Safety community. By using the web for information exchange, we can provide a good contact roster for each EWO in the Army National Guard, Reserve, and active duty. We can help set the standards and provide protocol for future ASE Programs, and all the required equipment, funding, resources. The Indiana Army National Guard has set up an ASE Program that could be a model for any Reserve component's aviation unit. On returning from the ASE/EWO School in

February 2000, I found that Indiana had two ASET-II trainers, one STU-III, which did not work, a four-drawer safe, and two folding tables for a desk. Today, two years and about \$60,000 later, we have four desktop computers and a large SECURED room in which to operate our ASE Program. Additionally, each unit EWO has a laptop computer. We have three aviation units. One laptop used exclusively for SIPR-NET, ARAT DDS, a filing cabinet (for each unit EWO to track training), upgraded AMPS, training radios (for HAV-QUICK, SINGARS, KY-58, KY-100, and HF), and much more. Funding this project required support from all our aviation units and the State Army Aviation Officer.

Step 1 "Selling"

The objective should be to use COMSEC, ASE, and Mission Planning on a daily basis during Additional Flight Training periods, two-week Annual Training periods, and Inactive Duty Training weekends. However, Commanders, IPs, and Army Aviation Support Facilities do not like to be told that they need to add additional training requirements to their plate. The idea that we do not need to learn or use these items is not feasible in today's Army. Due to the current optempo of the active Army, the Reserves and National Guard units are finding themselves on a short list of potential mobilization. As the Guard is fielded with modern aircraft, and now focusing on homeland defense, we cannot afford to overlook a solid ASE Program.



an essential element of all training in the Army today. We use computers during every mission and weather briefing, aircraft systems training, and other routine training events. Many publications, such as AFTTP Vol. 3-1, the ASET, and ROC V (7) programs, are all on CDs, requiring a computer. The AN/APR-39A (V) 1/2 requires access to the ARAT DDS website to download the MDS to the "EWOSS 2000" program. The MDS can now be loaded in the aircraft.

Just as a Safety Officer needs a laptop to track and conduct training, so do EWOs. A laptop is an essential tool all EWOs must have. Threat training does not stop while deployed to a field site. Effective mission planning and proper use of AMPS is a vital part of our mission training. With an upgrade to PFPS (Falcon View) and a color printer, units can have real-time battlefield information and threat situational awareness. Some additional equipment needed for a strong ASE Program: general office supplies, computer workstations, bookshelves, erasable training boards, filing cabinets, safe, and a large CD cabinet, all located in a dedicated secure room. Trying to find a secure room to operate an ASE Program may be difficult. No room—no program!



Training threat ID, ANCD AMPS, PFPS, and the use of ASE on our aircraft is time consuming. Documenting training and loading data files are just as difficult and require the use of our precious training time. Threat ID is more difficult today than ever. Equipment used on the battlefield may be the same between friendly and enemy forces, so we must be able to ID unit markings as well as the target. AMPS/PFPS can assist with equipment locations, movement of friendly forces, and effective range of threat weapon systems. The ANCD is a great tool that will hold all of the Secure Como. SOIs. and IFF codes. The challenge is training on the ANCD, knowing which application to use, and which code needs to be loaded for that piece of equipment. Self-contained radio sets (VHF/FM, UHF, with KY-58) that plug into 110 V AC, are effective static trainers. ASE is the most difficult part of the training. It is difficult to train in the aircraft without going to JRTC/NTC, so flight simulators are used heavily. The Air Force at Camp Atterbury, Indiana, has ASET-IV trainers. These trainers allow aircrews to train in the use of the M-130, AN/ALQ-144, and AN/APR-39A(V)1 systems.

Step 4 "COMSEC and Additional Training"





GPS, HAV-QUICK, IFF, KY-58, KY-100, and the HF radio all require COMSEC tapes. Normally, the unit EWO would take the ANCD to the signal COMSEC officer and load all codes, however, the COMSEC Officer/NCO are not always available. In some cases they may be located in another state with the units higher headquarters. In Indiana, the Army Aviation Support Facility (AASF) control the COMSEC tapes. Per regulation, the COMSEC tapes are to have their own storage safe. Crewmembers should use and train daily on using COMSEC.

SIPRNET/ARAT DDS is a great training tool. EWOs can get real-time information on what is going on in the world and prudential deployment areas. To get access to SIPRNET/ARAT DDS you must go through a STU-III, and in the near future, a STE. Ft. Monmouth requires STU-III to have 9600 kbps.

Why do we need these items? It's a little late to start learning SIPRNET/ARAT DDS during your next deployment. Additionally, a secured fax with its own STU-III is needed. After 9/11, we were receiving Secured faxes on a daily basis. In order to receive the faxes, we would travel 40 to 45 minutes to retrieve them, and then travel back to send a reply. The facility then received a secure fax.



Step 5 "Tracking"

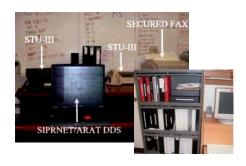


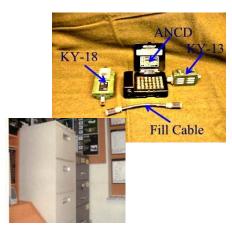
Establishing a good tracking plan is essential. The "Get Well" tracking sheet from Ft. Rucker is a good starting point. Individual, platoon, and units must track method of training. By tracking each individual. the platoon/unit will be in-line with the commander's training plan. At Brigade, Troop, and Battalion level we must track what the individual units need to accomplish their missions. Tracking of Codes and ANDC status is an essential task required for an EWO, and necessary for mission readiness, training, and per regulations. A simple mission board will suffice for this tracking system. Purchasing softback briefcases and incorporating a log book with various forms to track what, when, and which aircraft has been loaded would make tracking relatively easy. This is also a great way to track maintenance and usage on the ANCD. Tracking of the ASE equipment is a challenge that RC units must face daily. An AASF may maintain two or three different unit aircraft, however, these

are normally the same type of airframe. One unit's ASE item may be placed into another unit's aircraft if that equipment goes down for maintenance, making tracking difficult. Maintenance and avionics personnel must maintain a tracking system; a simple board may be used. As an EWO you must do accountability on this equipment at least quarterly. When pieces of equipment are shipped off to be repaired, that too must be tracked using the same tracking board.

Step 6 "Managing"

Managing an ASE Program is an arduous task in the Guard and Reserve for EWOs. The active Army has EWOs, Mission Planners, COMSEC personnel who handle the needs of the unit. Guard and Reserve flight facilities do not have full-time EWO positions—it is a secondary duty that is passed around to the new guy. Tracking requirements, COMSEC, and daily training will keep your ASE Program strong. Safety and aircrew survivability are the most important consideration in Army Aviation, so why is our aircraft survivability equipment not being trained and used?





he Armv Reprogramming Analysis Team (ARAT) is a networked group of organizations from the Army's CECOM SEC, 1st Information Operations, and Training and Doctrine Command, as well as Joint Services and Department of Defense (DoD) activities. Their mission is to support the Tactical Commander by providing timely reprogramming of mission software for systems requiring rapid reprogramming. Essentially, the ARAT provides threat analysis and software changes, not readily possible by operator input, in response to rapid deployment or to changes in the threat environment

The CECOM SEC's Electronic Combat Branch (ECB) specializes in providing systems engineering support related to reprogramming the Mission Data Sets (MDS) for Aircraft Survivability Systems (ASE). These systems include radar signal detecting sets, laser detectors, radar jammers, and missile countermeasure sets used on a variety of rotary wing, fixed wing, and surface vessel platforms. Although MDSs are the essence of ASE systems, they do no good if they cannot reach the War Fighter, and it is the ECB's responsibility to ensure that they get to the field. ECB's Rapid Reprogramming Communication Infrastructure Lab (R²CIL) ensures that through dial-up SIPRNET (Secret Internet Protocol Router Network) services, War Fighters are able to gain access to MDS files, as well as ASE mission essential information.

Electronic Combat Branch Reprogramming Communications Services

ARAT-R²CIL engineers play an active role in engineering, supplying and supporting an infrastructure of computer servers, networks, and communication devices to allow War Fighters the capability of accessing mission critical data. This capability extends from remote dial-up capability to direct SIPR-NET access. At the ECB-ARAT, R²CIL engineers have designed a system of servers and incorporated communication devices that allow remote War

Fighters, such as Army Aviation Electronic Warfare Officers, to use National Security Agency approved dial-up encryption devices such as the STU-III and STE to access ASE generated information, MDS, as well as SIPRNET informational access.

Accounts and Access

The ARAT communications infrastructure has opened the doors both to services and information provided by the ECB and to data produced by the National Intelligence Community. The following paragraphs describe the various accounts available through the ECB and the means to access them.

If you are a War Fighter and require access to the MDS, Tactics, Techniques, and Procedures, and other related threat data files for your ASE. you will need to establish an account on the Multi-Service Electronic Warfare Distribution Data System (MSEWDDS). The MSEWDDS, located at Eglin Air Force Base (AFB), Florida, holds the MDS and other files that you will need, and is structured with several mirror sites to ensure continuity of access. To access the MSEWDDS, you will first need to complete the "MSEWDDS Account Request Form," which you can download from the Internet/NIPRNET (Nonclassified Internet Protocol Router Network) ARAT website at URL

http://www.sec.army.mil/arat/

(Click on the *Information* link, and then the *Account Application Forms* link.)

For those who require additional intelligence data, or are looking for a more dependable and a more advantageous method to gain access to ASE related classified data, you should turn to the R²CIL communication services, thus access to ARAT SIPRNET services and servers. The SIPRNET is just like the Internet, except encrypted (thus secure) at the SECRET Collateral level. Also just like the Internet, the SIPRNET has a WWW (World Wide Web) site known as INTELink-S, which provides access to intelligence reports and

information from a variety of National Intelligence Community agencies such as the National Imagery and Mapping Agency, the Defense Intelligence Agency, and the National Ground Intelligence Center. You can access SIPRNET through a direct drop at your location or via a direct dial-up SIPRNET account that is offered by the ECB-ARAT R²CIL Communications Team at CECOM.

To establish a direct SIPRNET drop at your location, you will need to coordinate directly with the Defense Information Systems Agency. A direct drop has its advantages, but it also is a costly and time intensive effort that does not lend practicality to mobile War Fighters. The alternative is to obtain an ARAT dial-up SIPRNET account via the R²CIL team at CECOM.

As mentioned, the MSEWDDS site is accessible via SIPRNET/INTELink-S through a link on the ECB-ARAT SIPRNET website. This link allows users to access the MDS files via the ECB ARAT SIPRNET web server, provided they have an MSEWDDS account (userid and password). In addition, by attaining an ARAT SIPR-NET account, you will also be issued a classified email account on the ECB-ARAT SIPRNET web server, which will enable the user to exchange email with any other user on the SIPRNET. Other resources include ASE related information, as well as access to a TACOPS classified website.

To obtain an ECB-ARAT dial-up SIPRNET account, you will need to fill out an ECB-ARAT account form and send it to the ARAT Ft. Monmouth ECB (fax # on form). You will also need to send your clearance information from your S-2 and your computer's accreditation paperwork from your IMO/AMO/ISSO/TASO personnel. If you do not have an ARAT account form, you can download it from the Internet NIPRNET ECB-ARAT website at URL

Continued on page 12

US and Republic of Korea (ROK) Armv forces strengthened coalition war fighting capabilities during the WARPATH III Command Post Exercise (CPX) at Camp Casey during the latter part of April. The exercise, in which an artillery offensive is simulated against an imaginary enemy, places the coalition forces in a realistic setting that goes a long way toward being ready to fight. The objectives of WARPATH are broken down into two phases. The first phase is to help Division Artillery do a training evaluation of a counter-fire exercise while practicing a wartime simulation. The second phase is designed as a war game in which a scenario is played out on computers in order to train battle leadership in situations. WARPATH exercises are Division level CPXs designed to train for actual wartime missions. These exercises involve execution of OPLAN missions, planning for future operations, and division level rehearsals. WARPATH is also used to train for the War Fighter Exercise that occurs mid-May.

Although it sounds like a giant roleplaying video game, the massive, computer-simulated WARPATH designed to help 2ID prepare for the upcoming War Fighter Exercise and to deter North Korean aggression against the ROK. The computer simulation is technology at its best, and allows the exercise players to get realistic intelligence reports on enemy troop and vehicle movement from software programs that create the reports by combining satellite data with actual aerial photos of specific terrain in Korea. This realistic intelligence feed is received and processed by both the Division and higher headquarters staff elements. Unlike divisions under I Corps, V Corps, and other divisions under III Corps, 2ID has no in country Corps Headquarters and is subordinate directly to the 8th US Army (8USA) in Seoul, Korea, during Armistice. This presents some unusual challenges during the WARPATH exercises leading up to the actual War Fighter. 8USA, however, does not have the intelligence staff and automation assets possessed by a typical Corps staff supporting a Division War Fighter

Exercise. For this reason. a 2ID WARPATH draws on Intelligence assets from around the ROK to provide the automated analysis tools necessary to process the high volume of message traffic generated during the exercise. 8USA's G-2 joined forces with elements of the 501st Military Intelligence Brigade's Ground

Component Command-Combined Analysis Control Center to stand up an Intelligence Control Element (ICE), which simulated the Corps Analysis Control Element for 2ID during WARPATH III exercise.

As LTC Russell Horton, 2nd Infantry Division G-2 said, "New technology plays an important role in training exercises such as WARPATH. The biggest advantage we have is the new technology to enhance the commander's vision of the battlefield." Also, creating an authentic battlefield simulation is critical. "It has to seem like a real situation to be successful," LTC Horton. The said work relationship with the ROK Army continued to be a theme for LTC Horton, as well. "It's critical to work together," he said. "To provide a picture for the commander, we need to have a great relationship." LTC Horton credited the Korean Augmentations to the United States Army (KATUSA), who are ROK soldiers that are assigned to and under the control of US units for the full duration of their enlistment, for helping smooth out any communication barriers that might hinder a smooth working relationship between the counterparts. "The KATUSAs do a great job," he said. "Intelligence along with clear communication between both sides is ultimately the most important element for an exercise such as WARPATH to be a success," said LTC Horton. "We try to predict what the enemy is doing and present information to the commander to make a decision."



All Source Analysis Systems (ASAS) are key elements in the Army's efforts digitize command and control functions at all echelons. With ASAS at the heart of fusing the battlefield information, LTC Horton started the effort to upgrade the ASAS-All Source hardware with XP-1000s. The All Source system was a major role player in WARPATH, but the current system's speed hampered the processing of INTEL information. With the new XP-1000s on the way, the G-2 and the Commander's expectations are high.

SEC Intelligence Fusion Systems Field Software Engineers (FSEs) support several different commands around the peninsula in setting up, configuring, and maintaining the ASAS suite (All Source, Single Source, Communication Control Set (CCS), Remote Workstation BLK I & II, Light), Integrated Meteorological System (IMETS), Digi-Topographic Support System (DTTS), Common Ground Station (CGS), and Joint Services Workstation (JSWS) during these exercises. This effort requires a great deal of planning to ensure availability of network connectivity, system address books, and properly configured hard drives for the system and locations identified. While this is a War Fighter responsibility, FSEs in country provide continuity of operations in that the average FSE has been in country over four years whereas soldier/operators generally rotate every year. This extensive knowledge of systems configuration and operation provides the unit with a knowledge



base from which to draw on when determining requirements for a War Fighter Exercise.

FSEs assisted the unmanned aerial vehicle contractors and ASAS-RWS operators with automatically generating Target Intelligence Data and Tactical Reports for the first time. This greatly enhanced the speed of providing targeting information to the Air Missile Defense Warning System and Advanced Field Artillery Tactical Data System. Also, the Forward Area Support Terminal was deployed for WAR-PATH. It has been many years since this system was deployed and FSE assisted operators to establish communication links with the ASAS-CCS system. Another first was the ASAS-CCS connectivity with the 8USA/501st MI BDE ICE ASAS-CCS.

The IMETS is a HUMVEE mounted tactical automated weather data receiving, processing, and dissemination system designed to provide timely weather and environmental effects for forecast, observations, and decision aid information to multiple command elements and their major subordinate commands at echelons where US Air Force Weather Teams provide support to the Army. FSEs provided support to

the 2AVN BDE and 2ID IMETS deployed to Camp Casey for WARPATH. The IMETS provides the supported Army commander with weather effects on both friendly and enemy equipment to assist them in developing their Courses of Action and their Operation Plans. This is accomplished by

determining if weather factors are favorable, marginal, or unfavorable to the proposed courses of action.

The 2ID WARPATH exercise would not have happened without dedicated support of the 122nd SIG BN "Voice of the Warrior." The 122nd SIG BN installed, operated, and maintained the command and control communication architecture for the entire WARPATH exercise. They accomplished this enormously complex task through the use of their Mobile Subscriber Equipment, such as the Node Center Switch, Large Extension Node, Small Extension Node, and the Tactical High Speed Data Network. These CECOM supported systems gave the War Fighter an added edge on the battlefield through the use of switching, radio trunking, communications security, system control, and video teleconferencing. It is important to note that the 122nd SIG BN soldiers established this complex network in one of the world's most geographically lenging areas of operation. Anytime a WARPATH participant talked on a radio, dialed up a number on a phone, or logged on to a tactical network, they had the 122nd SIG BN soldiers and their supporting CECOM staff to thank.

During the exercise the primary role of the 37th/88th Engineer Detachment's DTSS-D, DTSS-L is to provide a topographical depiction of the battlefield. They provide the commander with avenues of approach, mobility corridors, cross-country mobility, landing zones, and any key terrain features that might hinder movement. They do this by plotting maps. The DTSS uses various National Imagery and Mapping Agency vector data, and satellite imagery to do this analysis. The unit also provides data to other systems to use, which helps them to accomplish their mission.

The CGS and JSWS are the US Army's premiere Tactical Ground Stations providing real-time, multi-sensor Command, Control, Communications, Computers, and Intelligence capabilities. The CGS and JSWS provide capabilities to support the following mission needs: Real-Time Surveillance, Reconnaissance, Situation Awareness, Target Development, Theater Missile Defense, and Battlefield Visualization. The 102nd MI BN deployed their CGSs to Camp Casey for WARPATH III. Simulated Joint Stars Moving Target Indicator was fed to the CGSs taking part in the exercise. The CGS operators analyzed the imagery, cross queued with other sensors, and sent reports via ASAS to provide commanders with the information they need to win the fight. FSEs were on-site to support this effort.

When End of Exercise is called, the FSE mission is not over. FSEs assigned to the Asian Region also assist the units in hardware/software logistics issues and preparation for the next training event, which in this case is the War Fighter Exercise just around the corner. FSEs are continuously being integrated in the unit's cycle of training and operations to provide the best support at all times.

http://www.sec.army.mil/arat/

(Click on the Information link, and then the Account Application Forms link.)

Note: If you are unable to access or download any of the forms mentioned above, call one of the R²CIL points of contact listed within this article, and they will either fax or mail it to you.

Once you have completed all of the necessary paperwork and received approval from the ARAT, you will need to have the following hardware and software, at a minimum, to gain dial-up access to the MSEWDDS or the SIPRNET:

- ◆ STU-III/STE: The STU-III will need to have a minimum data transfer rate of 9600 bps, preferably 38400 bps. The ARAT recommends a Motorola SECTEL 1500, or AT&T (Lucent, General Dynamics) 1100 or 1910, or an L-3 Communications STE. Be aware, however, that you can no longer purchase the STU-III as DoD is phasing it out of its inventory. See the July 2001 issue of the A/IEW Bulletin for details on replacement technology to the STU-III.
- TCP/IP/PPP: (Transmission Control Protocol/Internet Protocol/Point to Point Protocol) Software such as Microsoft's Dial-up networking which is included in Windows 95, 98, NT, 2000 and XP.
- ◆ Web browser software (e.g., Netscape or Microsoft Internet Explorer).

ECB-ARAT has been involved in trying to incorporate new secure communication devices into its suite of dial-up capabilities. Please call R²CIL points of contact for updated information and product offerings.

ASE R²CIL Reprogramming Support

Connectivity is only part of the ASE reprogramming process. Once you have obtained the MDS file, you will need to program that MDS into your ASE. To do so, you will need the following equipment and software:

◆ ARAT Memory Loader/Verifier (MLV) Kit. This kit contains the cable needed for reprogramming. You can request the kit by filling out the MLV Reprogramming Kit Request Form at

http://www.sec.army.mil/arat/

(Click on the *Information* link, and then the MLV request link.)

 Reprogramming software, EWOSS V. 1.05 (Windows 95/98/NT/2000) or MLV (DOS). This software is on the ARAT Toolbox CD (see below) or can be downloaded from the ARAT NIPRNET or SIPRNET sites

http://www.sec.army.mil/arat/

(Click on the *Information* link, and then the ARAT Software Library link.)

◆ A computer. Obtaining a computer (preferably a laptop) is the user's responsibility, but the ARAT can assist you in locating surplus computers that may fulfill your needs.

R²CIL Help Desk Support

The success of the ECB-ARAT has been our ability to assist the War Fighter before, during, and after the ARAT account process. Our R²CIL engineers are available to respond to user needs and problems and, if necessary, talk you through any of the processes until the issue is resolved. Our support team, formed in the 1990s, uses commercial field support techniques to put the War Fighter support first, and a priority. These techniques have been proven and tested during Operations "Allied Forces," "Enduring Freedom," and "Iraqi Freedom." Team members can assist with questions concerning paperwork, software, hardware, and communication technical questions or issues.

You can contact the ARAT Communications Infrastructure Support Staff at

DSN: 992-9395 or

Commercial: (732) 532-9395

Contacts: Mr. Mike Crapanzano, Mr. Marc Demarest & Mr. Eric Lee

Email:

mailto:Michael.Crapanzano@us.army.

mil

mailto:Marc.C.Demarest@us.army.mil

mailto:Eric.Lee6@us.army.mil

For MSEWDDS specific assistance, contact Mr. Robert Hankins at (312) 872-2166 (DSN) or (850) 882-2166.

ARAT also offers and supplies an ARAT Toolbox CD that contains all of the account forms, software, and documentation needed to obtain. configure, and access an ARAT SIPRNET dial-up account. You can request the CD via the Internet at

http://www.sec.army.mil/arat/

(Click on the *Information* link, and then the ARAT CD request link.)

Another service available to ARAT users is the Battlespace Systems Support Directorate (BSSD) Bulletin. This bulletin began as the ARAT Bulletin in 1994, then migrated to become the Avionics/Intelligence and Electronic Warfare Bulletin in 2000. Today's BSSD Bulletin provides insight into a variety of systems supported by the CECOM SEC while maintaining a focus on issues of particular interest to the ASE community. War Fighters interested in receiving this quarterly bulletin should contact

US Army CECOM Software Engineering Center Attn: AMSEL-SE-WS Ft. Monmouth, NJ 07703 DSN: 992-3538 or Commercial (732) 532-3538

Previous bulletins are available for review and download at the ARAT website at

http://www.sec.army.mil/arat/

(Click on the *Information* link, and then the BSSD/AIEW/ARAT Bulletin link to access this archive.)

One important note on the BSSD Bulletin—this is your publication as much as it belongs to the BSSD. We need your input, especially articles about lessons you've learned that will benefit other War Fighters.

Summary

The ARAT has much to offer to the War Fighter, especially those in the ASE community. The ARAT staff at ECB-CECOM stand ready to provide assistance to any War Fighter requiring the ARAT-R²CIL services.

If you require our services, remember these key points:

- ◆ If you require access to the MSEWDDS via dial-up and or via the ARAT SIPRNET, you must provide the necessary information to the MSEWDDS staff at Eglin AFB, Florida, regardless of the method of access you are going to use.
- If you require access to the MSEWDDS and dial-up SIPRNET access, you will need to fill out an
- MSEWDDS account form (see above bullet) and also provide a completed ARAT dial-up SIPRNET account form, your security clearance, and computer accreditation information to the ECB-ARAT at CECOM Ft. Monmouth. New Jersey.
- All the necessary forms and memos and examples are available for downloading from the ARAT Internet/NIPRNET website at URL

http://www.sec.army.mil/arat/

(Click on the *Information* link, and then the Account Application Forms link.)

MSEWDDS administrative staff at Eglin AFB, Florida, handles the MSEWDDS accounts, and the ARAT staff at Ft. Monmouth administers dial-up **SIPRNET** access accounts. The Ft. Monmouth staff can also assist you in contacting and forwarding your paperwork to the MSEWDDS **MSEWDDS** staff, but not in creating the actual MSEWDDS account.

For additional information about the ARAT, visit the CECOM SEC's ARAT website at

http://www.sec.army.mil/arat/

Software Enhances the Commander's Understanding of **Surveillance System**

Submitted by Alejandro Angel, CECOM SEC



Screen shot of the main menu for the Commander's Introduction to the CGS System.

he US Army Common Ground Station (CGS), AN/TSO- \sim 179(V)2, is a highly mobile, near real time, multi-sensor processing and exploitation system that provides commanders at Corps, Division, and Brigade echelons with unprecedented situational awareness. The CGS acquires, processes, displays, and disseminates data from multiple air and ground sensors including the US Air Force Joint Surveillance and Target

System (JSTARS) Attack Radar airborne sensor, All Source Analysis System (ASAS), Advanced Field Artillery Tactical Data System (AFATDS), Unmanned Aerial Vehicles (UAV), U2, Airborne Reconnaissance-Low, Guardrail Common Sensor, and Apache Longbow radar. The CGS also handles a variety of processed intelligence from national, operational, and tactical broadcasts via the Commander's Tactical Terminal or the Joint Tactical Terminal. The CGS can correlate and display all of this information simultaneously and provides a robust suite of communications equipment for secure data link, radio, satellite, and landline communications.

With CGS having the ability to interoperate with over 15 different Joint services external interfaces, Project Manager Distributed Common Ground System-Army envisioned the need for a product to enhance the commander's understanding and utilization of the CGS to achieve mission objectives resulting in the development and fielding of Version 1.0 of the Commander's Introduction to the CGS System. This CECOM SEC developed product is a stand-alone interactive application that runs on any standard personal computer with a CD-ROM drive. It provides the commander with an overview of the features and capabilities of the CGS System, CGS component identification, and how the system can be used by the commander in four different mission scenarios (see figure on page 13). The mission scenarios are conveyed through a series of animated movie clips and include an Intelligence support mission, a Fire and Targeting support mission, and a Battlefield Management support mission. In addition, an example of a full force protection mission is provided to show how important CGS assets can be in achieving mission objectives.

The Full Force Protection Mission Scenario example provides a representation of a full force protection mission. Scenario is provided to show how important CGS assets can be to the War Fighter.

The Features and Capabilities section demonstrates the features and capabilities of the CGS System. Some features include SCDL Link to E8-C, Hard Copy via STE and Color Printer, Digital COM link via LAN/WAN, MSE, SIPRNET, Hardwire, and so on.

The Intelligence Mission Scenario example provides an understanding of CGS Intelligence capabilities and features including Acquisition of Preanalyzed/Sanitized Data via ASAS/MCS/AFATDS, MTI and SAR Data via JSTARS E-8C, Video and Telemetry Data via UAV, and so on.

The Fire and Targeting Mission Scenario example offers an overview of the near real-time targetable combat information, and intelligence generated through the correlation of multiple data

sources such as SAR, UAV, and SIGINT.

The Battlefield Management Mission Scenario example provides Battlefield Management Support through preanalyzed and sanitized data along with correlated multi-sensor feeds. Along with receiving battlefield information, the CGS System also disseminates this information to other key systems.

The Components and Identification section allows the commander to explore the abilities and systems that are present inside and outside of the CGS System in a virtual 3-D environment

A second and final version of the Commander's Introduction to CGS release Version 2.0 is being developed and is scheduled for formal release in 4QFY03. Version 2.0 will add the Embedded Training Section, which provides the commander with a better understanding of the different training capabilities embedded within the actual CGS System.

Tales from the Fleet

Submitted by Major Scott S. Jensen, USMC, HML/A-269

y crew and I were flying 'dash 3' on two cobras as part of a hunter killer team in the vicinity of Tikrit around the 14th of April. Conditions were High Light Level Night Vision Goggles with decent visibility. A flight of two AH-1Ws before us had discovered a huge ammo storage facility that covered roughly 2 square miles of the desert. They had received approval to attack the bunkers and were in the process of controlling FW aircraft and delivering their own weapons.

My flight lead took control of the fight when the flight before us had to leave for fuel. My aircraft was assigned security for our flight while my lead controlled the jets in the attack and delivered his own ordnance. The AH's were in hover holds while I flew to their 6 o'clock in a flat eight or race track.

We had been receiving multiple radar warnings from friendly artillery, jets and XXX (blue radars) throughout the day. This, coupled with intense radio traffic, caused me to "tune out" the audio warnings from the APR-39A(V)2 (AAR-47 through the APR-39A(V)2 IP1150). Luckily my crew chief had the SA to pick up the scan of the audio. My 39A(V)2 was warning of a missile launch and my copilot and I did not My crew chief heard the hear it. warning and scanned the sector, discovering a missile in fly-out towards us. My crew chief called for flares and a break. Immediately all four of us went for expendables, but the AAR-47 auto expended before we could react. I am not certain what systems were operating on the AH's at the time. It was very late in the war (these guys had been flying and shooting 24/7 since the first days of the war!) and I am assuming that by then most of our systems had

degraded significantly. My ALQ was inoperative. The AH crews never saw the missile and my left side crew chief was the only one that visually acquired the missile. To this day, I do not know the type of missile or range it was fired from.

The bottom line, however, was that the integrated suite of systems worked as advertised. We received a detection and warning from the AAR-47 and APR-39A(V)2. When the parameters had been met for an auto dispense, the ALE (old ALE-39), combined with maneuver, prevented the missile from impacting the aircraft. It was a lucky night for us, but it renewed my confidence in the systems we have and their ability to protect us.

Please pass my thanks and appreciation to all of those that support us in the effort to protect our crews and aircraft.

For Your Information

Now Available on the Web

All 28 previous issues of the "ARAT Bulletin," "A/IEW Bulletin," and "BSSD Bulletin" are now available on the ARAT website. The issues are available in HTML format for on-line viewing, as well as in PDF and MS Word format for viewing and downloading. The ARAT website can be accessed at http://www.sec.army.mil/arat/ or from a link on the A/IEW website at http://www.sec.army.mil/aiew/

Help Us Help You

If you are moving, have moved, or your address is listed incorrectly on the mailing envelope, please email Kimberly.Weaver@mail1.monmouth.army.mil (alternate: Sheri.Charpie@mail1.monmouth.army.mil) with the correct address. Many bulletins are returned for incorrect addresses and unknown addressees. We would like to reduce the amount of returned mail and ensure that all of our customers receive the latest issue of the "BSSD Bulletin." Thank you for your support.

Article Submission

Personnel interested in submitting an article may forward an electronic copy (MS Word format) to John. Hakim@titan.com or Ken. Collyer@mail1.monmouth.army.mil.

ARAT Rapid Reprogramming Communications Infrastructure Laboratory (R²CIL)

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Email:

Unclassified: ARAT@ems.sed.monmouth.army.mil SIPRNET: webmaster@arat.army.smil.mil

ATTENTION ELECTRONIC WARFARE OFFICERS!

Electronic Warfare Officers requiring Memory Loader/Verifier (MLV) reprogramming kits, copies of the "ARAT Software and Documentation Toolbox" CD or the "Mission Data Set Training" CD should contact either

Mr. Mike Crapanzano

(DSN: (312) 992-9392/CML: (732) 532-9392) (michael.crapanzano@mail1.monmouth.army.mil)

or R²CIL

(DSN: (312) 992-9395/9392/CML: (732) 532-9395/9392) (ARAT@ems.sed.monmouth.army.mil)

or make ToolBox CD requests at:

NIPRNET: http://www.sec.army.mil/arat/ARAT/ARAT_information/forms/CD_request/cd_request_form.htm

SIPRNET: http://www.arat.army.smil.mil

or make MLV kit requests at:

NIPRNET: http://www.sec.army.mil/arat/ARAT/ARAT information/forms/MLV request/mlv request form.htm

SIPRNET: http://www.arat.army.smil.mil

Coming Events				
Event/Sponsor	Location	Dates		
AUSA Annual Meeting	Washington, DC	6–8 October 2003		
Command, Control, Communications, Computers and Intelligence Technology	Ft. Huachuca, AZ	7 October 2003		
MILCOM 2003	Seaport Hotel Complex	13-16 October 2003		
Homeland Security Conference	Atlantic City, NJ	15–19 October 2003		
Space and Missile Defense Symposium	El Paso, TX	9–11 December 2003		
Aviation Symposium	Arlington, VA	5–7 January 2004		

The Battlespace System Support Community—Key Points of Contact				
Agency	Name/email	Comm/DSN	FAX Number	
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Chief, COMM Division	Mr. Jeffrey Downing jeffrey.downing@mail1.monmouth.army.mil	(732) 532-5163 DSN 992-5163	(732) 532-3065 DSN 992-3065	
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